**API NUMBER ASSIGNED** 43047513340000

STATE OF UTAH  DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING  FORM 3  AMENDED REPORT													
APPLICATION FOR PERMIT TO DRILL								1. WELL NAME and NUMBER Seep Ridge WIW 1					
2. TYPE O		L NEW WELL	REENTER P&	A WELL 📄 I	DEEPEN WEL	L 🔘	3. FIELD OR WILDCAT						
4. TYPE OF WELL  Water Injection Well Coalbed Methane Well: NO								5. UNIT or COMMUNITIZATION AGREEMENT NAME					
6. NAME OF OPERATOR								7. OPERATOR PHONE 435 940-9001					
SUMMIT OPERATING, LLC  8. ADDRESS OF OPERATOR  1441 Ute Blvd, Suite 280, Park City, UT, 84098								9. OPERATOR E-MAIL					
40 1471			Bivu, Suite 260	· · · · ·				david@summitcorp.net					
	<b>RAL LEASE NUM</b> . <b>, INDIAN, OR S</b> ML			federal	INDIAN	STATE	FEE	12. SURFACE OWNERSHIP  FEDERAL INDIAN STATE FEE					
13. NAME	OF SURFACE OV	WNER (if box 12	= 'fee')					14. SURFACE OWNER PHONE (if box 12 = 'fee')					
15. ADDR	ESS OF SURFAC	E OWNER (if box	12 = 'fee')					16. SURFACE OWNER E-MAIL (if box 12 = 'fee')					
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')				18. INTEND TO		LE PRODUC	TION FROM	19. SLANT					
				YES (Sub	omit Commin	gling Applica	tion) NO 📵	VERTICAL DIRECTIONAL HORIZONTAL					
20. LOCA	20. LOCATION OF WELL		FO	OTAGES	Q.	TR-QTR	SECTION	TOW	NSHIP	RANGE	N	MERIDIAN	
LOCATION AT SURFACE 1710			1716 FN	IL 1812 FEL		SWNE	35	13	e Ś	22.0 E		S	
Top of Uppermost Producing Zone 1716				IL 1812 FEL		SWNE	35		0 \$	22.0 E		S	
At Total Depth 17				IL 1812 FEL		SWNE	35	13.	0 S	22.0 E		S	
21. COUN		INTAH		22. DISTANCE TO NEAREST LEASE LINE (Fee)					23. NUMBER OF ACRES IN DRILLING UNIT				
				25. DISTANCE (Applied For D	<b>26. PROPOSED DEPTH</b> MD: 3700 TVD: 3700								
<b>27. ELEVATION - GROUND LEVEL</b> 6697				28. BOND NUMBER NZS633487					29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Permit T75377				
				Piole Cas	ing, and C	Cement In	formation						
String	Hole Size	Casing Size	Length	Weight	Grade 8	& Thread	Max Mud	Wt.	Cement	Sacks	Yield	Weight	
Cond	20	14	0 - 40	0.0		known	15.6		Class A	40	1.18	15.6	
Surf Prod	7.875	9.625	0 - 3700	32.3 17.0		0 ST&C 0 LT&C	14.6		Class G 50/50 Poz	542 247	1.56	14.6 12.5	
ATTACHMENTS													
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES													
WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER COMPLETE DRILLING PLAN													
AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE) FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER													
DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY TOPOGRAPHICAL MAP													
NAME Kristi Higgs TITLE Operations					PHONE 435 940-9001								
						/16/2010 <b>EMAIL</b> kristi@sun				ummitcorp.net			

APPROVAL

Summit Operating, LLC 1245 Brickyard Rd, Suite 210 SLC, Utah 84106 435-940-9001

Seep Ridge WIW 1
Seep Ridge Produced Fluid Disposal Project
SWNE Section 35, T13S, R22E, SLM, Uintah County, Utah
Utah SITLA Oil and Gas Lease ML-50803

All operations will be conducted in such a manner that full compliance is made with applicable rules, laws, regulations, the approved plan of operations and the conditions of approval. The operator is fully responsible for the actions of its subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

#### A. DRILLING PROGRAM

1. Surface formation and estimated formation top in feet beneath GL elevation:

Green River Formation
Wasatch Formation (Main)
North Horn Formation
Mesaverde Group

Further Formation 3700' 3700'

2. Estimated depth at which oil, gas, water or other mineral bearing zones are expected to be encountered (depth/formation):

Expected oil zones: Any porosity 2800'-3200'/Wasatch Formation
Expected gas zones: Any porosity 2800'-3200'/Wasatch Formation
Expected water zones: Fresh aquifers 100'-500'/Green River Formation

Brackish 500'-1800'/Green River Formation
Brine and brackish 2100'/Wasatch Formation
Brine and brackish 2700'/Wasatch Formation
Brine and brackish 2850'/Wasatch Formation
Brine and brackish 2990'/Wasatch Formation
Brine and brackish 3300'-3500' North Horn

Formation

Brine 3700'/Tuscher Formation

Expected mineral zones: Oil Shale surface 100'/Green River Formation

Tar sand layers 100'-600'/Green River

Formation

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and will be cased and cemented. When possible, water flow

rates will be estimated and reported on Form 7 "Report of Water Encountered During Drilling."

## 3. <u>Casing Program.</u>

- a. Conductor: New 14" pipe set at 40' in 20" hole.
- b. Surface: New 9.625" H-40, 32.3 ppf, ST&C 8rd casing set at 1,880' in 12.25" hole.
- c. Long string: New 5.5" N-80, 17.0 ppf, LT&C 8rd casing set at 3,700' in 7.875" hole.

# 4. Minimum Specifications for Pressure Control Equipment.

- a. 3,000 psi working pressure double gate blowout preventer and annular preventer if available or a rotating head can be substituted for the annular preventer. See Attachment 2b and part 44 below.
- b. Functional test daily.
- c. The surface and long casing strings shall be pressure tested (0.2 psi/ft or 1,000 psi, whichever is greater) prior to drilling the float collar or float show after cementing. Test pressure shall not exceed the internal yield pressure of the casing.

The BOPE and related control equipment shall be tested at the rated working pressure of the stack assembly or at 70 percent of the minimum internal yield pressure of the casing, whichever is less. Testing shall be conducted at the time of installation, prior to drilling out for a period of 15 minutes with no more than 10% pressure loss.

- e. Auxiliary equipment shall include:
  - 1) An operational Kelly cock;
  - 2) Automated mud gas monitoring on the mud system;
  - 3) A full opening stabbing valve available on the drill floor and
  - 4) A rotating head rated at 500 psi working pressure.

# 5. <u>Cementing Program.</u>

a. Conductor: Ready-mix concrete top-filled inside and outside or

15.6 ppg Class A slurry circulated to surface.

- b. Surface: 542 sx premium cement with 4% bentonite, 2.8 lbs/sk gilsonite and 0.25 lb/sk cellophane flakes to yield 1.56 cuft/sk of 14.6 ppg Class G slurry circulated to surface. 50% excess for gauge hole includes top out of possible fall back.
- c. Long string: 247 sx 50-50 Pozmix cement with 4.0 lbs/sk bentonite, 8.0 lbs/sk Silicalite, 4.0 lbs/sk Granulite, 0.5 lb/sk Halad-344, 0.5 lb/sk Versaset and 0.25 lb/sk Poly-E-Flake to yield 1.84 cuft/sk of 12.5 ppg Class H slurry circulated to near 1500°. 10% excess for gauge hole.

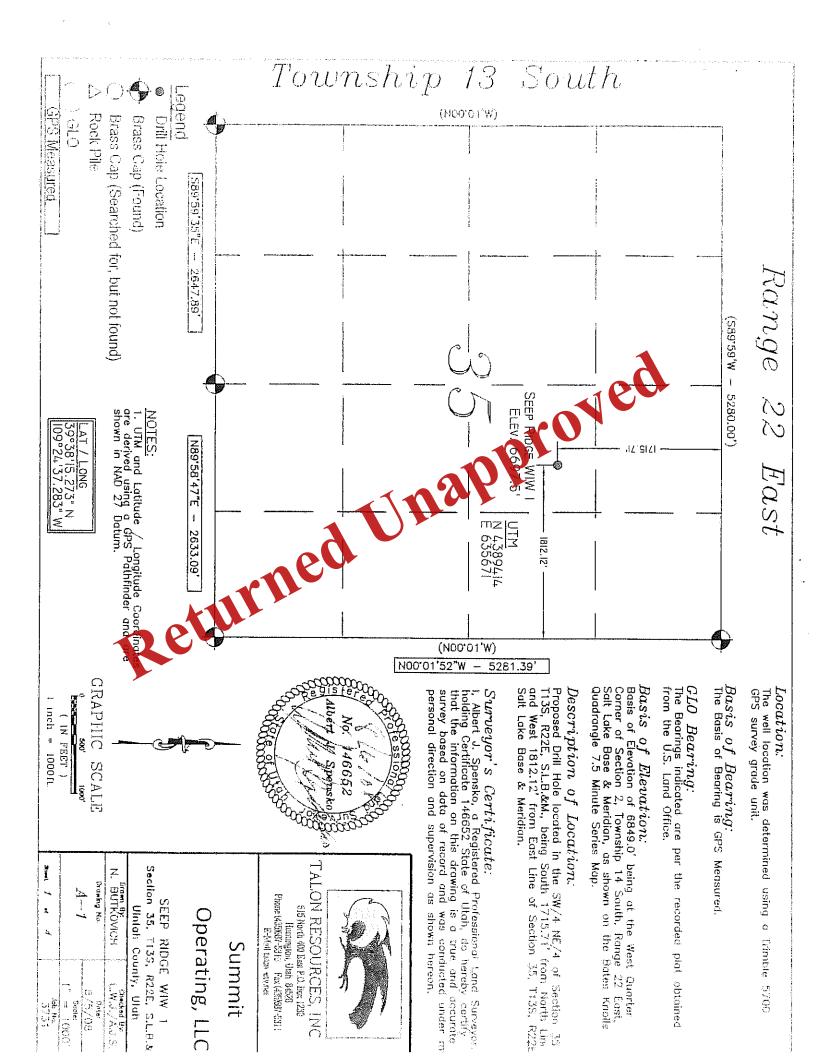
### 6. Mud program and circulating medium.

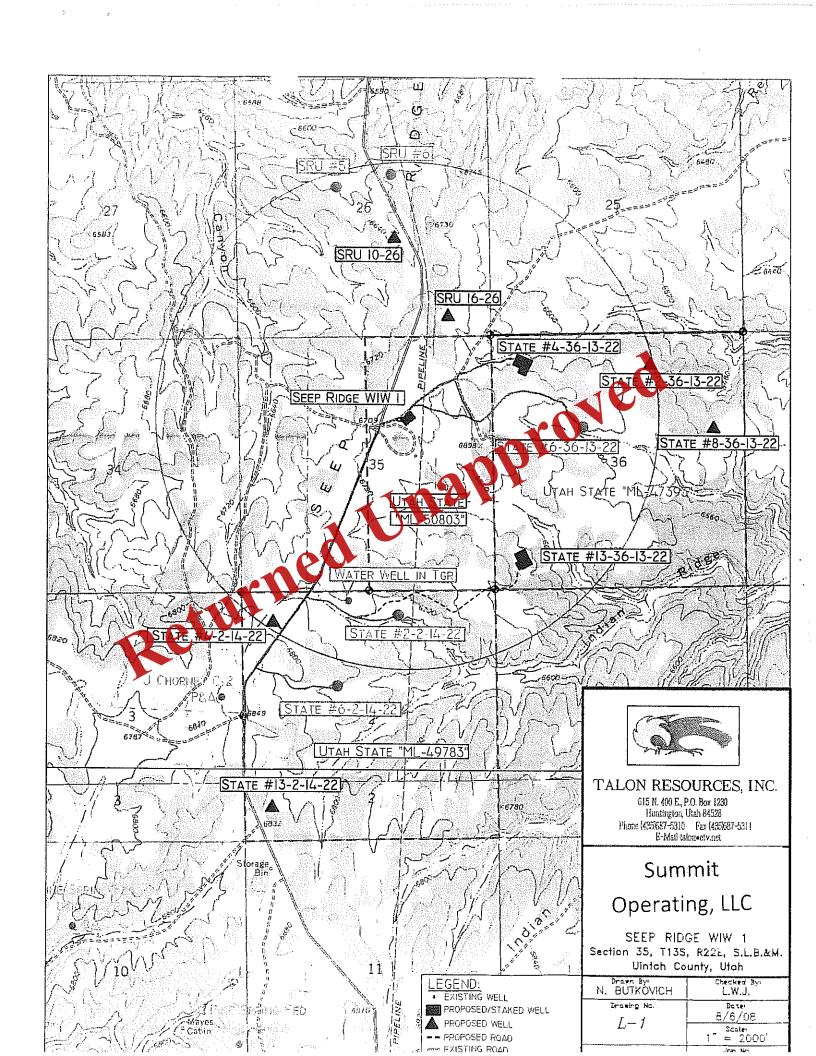
- a. Surface hole: Air, mist or foam as conditions require. No live hydrocarbon deposits are known to exist in the Green River Formation in the vicinity allowing the surface hole to be drilled with rotating head or diverter and short blooie line.
- b. Long string hole: Low solds KCl polymer mud in 8.6 to 9.2 ppg range. A gas detector will be used from surface casing shoe to TD
- 7. Coring, logging and testing program. The long string hole will be logged with Caliper High Resolution Induction (or Laterolog), Spectral Density and Dual Spaced Neutron roots. A Gamma Ray log will be recorded from TD to the surface. No cores of tests are planned. After the long string casing cement has cured for at least five days, a Cement Bond Log and Gamma Ray log will be acquired to determine height and quality of cement and the location of casing collars.
- Abnormal conditions, bottom hole pressures and potential hazards. No abnormal pressure or temperature conditions or hydrogen sulfide deposits are known to exist based upon experience with the construction of wells in adjacent sections in the last two years. Loss of circulation has been known to occur in the Green River Formation, and that formation will be drilled underbalanced with air, mist or foam to avoid such a problem in the surface hole. The formation pressure at TD near 3700' is expected to be approximately 1,400 psi or slightly below normal. The temperature at TD near 3700' is expected to be approximately 90° F.

#### B. SURFACE USE PLAN

The location construction (dirt) contractor will be provided with an approved copy of the surface use plan of operations before initiating construction

1. Existing roads. The access road to the site is reached using (encroaching upon) existing roads from Vernal, Utah including 14.9 miles west on US 40 to the intersection of US 40 and UT 88 then 16.6 miles south on UT 88 to Ouray where that road transitions to Uintah County 2810 (Seep Ridge Road) then 34.4 miles to the





15.6 ppg Class A slurry circulated to surface.

- b. Surface: 542 sx premium cement with 4% bentonite, 2.8 lbs/sk gilsonite and 0.25 lb/sk cellophane flakes to yield 1.56 cuft/sk of 14.6 ppg Class G slurry circulated to surface. 50% excess for gauge hole includes top out of possible fall back.
- c. Long string: 247 sx 50-50 Pozmix cement with 4.0 lbs/sk bentonite, 8.0 lbs/sk Silicalite, 4.0 lbs/sk Granulite, 0.5 lb/sk Halad-344, 0.5 lb/sk Versaset and 0.25 lb/sk Poly-E-Flake to yield 1.84 cuft/sk of 12.5 ppg Class H slurry circulated to near 1500°. 10% excess for gauge hole.

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intersection at the Bookcliff (McCoy) Ranch corrals for a total of 65.9 miles. The existing access road to the east serving the State 6-36-13-22 well leads 0.1 mile to the site of the proposed well where that road will form the northwestern boundary of the drill pad. See Drawings A-2 and L-2 and Attachment 2c. The last 0.1 mile of existing access road will be armored with crushed shale to improve its running surface in a wider range of weather conditions. There are no plans for improvement of the other existing roads related to this application.

- 2. Planned access roads. The planned access road is limited to driveways onto the proposed well pad from the existing access road that was upgraded during November 2006 to serve the State 6-36-13-22 well and forms the northwestern boundary of the proposed well pad. See Drawings A-2 and L-1 and Attachments 2c and 2d. It is proposed to create an access point on the southwestern boundary of the well pad for drilling operations. After well completion operations, it is proposed to add a driveway on the northwestern boundary of the well pad from the existing access road to allow trucks to enter and exit the well pad over a looped trivery. See Attachment 2d. The maximum disturbed width of the upgraded and new driveways will be 30' to accommodate a travel surface of 20' to 24'. The terrain at the site is a relatively flat knoll that will not present any significant grade concerns. No turnouts are planned. No drainages will be crossed. Tulver installations may be necessary beneath the driveways parallel to the existing access road to improve drainage. The driveways will be graded to an 8" crown from native materials and the travel surface armored with crushed shall or gravel road base. No road construction will occur outside the boundaries of the SITLA tract under ML-50803.
  - Location of existing wells. Drawing L-1 and Attachment 2c are maps that depict the locations of existing wells and possible future drill sites within a one mile-plus radius of the proposed location:

Bookcliff Ranch water well in NENW Section 2, T14S, R22E, SLM

Shut-in gas well Seep Ridge Unit 5 in SENW Section 26, T13S, R22E, SLM

Producing gas well SRU #6 in SWNE Section 26, T13S, R22E, SLM

Post-drill testing gas well State 6-36-13-22 in SENW Section, 36, T13S, R22E, SLM

Producing gas well State 6-2-14-22 in SENW Section 2, T14S, R22E, SLM

Suspended gas well with surface casing set for State 2-2-14-22 in NWNE Section 2, T14S, R22E, SLM

APD's in NWSE and SESE Section 26, T13S, R22E, SLM and built but suspended location for State 4-36-134-22 in NWNW Section 36, T13S, R22E, SLM

No currently drilling wells

No injection wells

No disposal wells

- 4. <u>Location of injection facilities</u>. See injection facility plan, Attachment 2d.
  - a. On-site facilities: Well head, pump, injectate tank, two-phase separator, oil tank, offload tank, fuel gas meter
  - b. Off-site facilities: None
  - c. Pipelines: 1" buried plastic fuel gas pipeline from interconnection point between State 6-36-13-22 gathering pipeline and the Energy Transfer 12" Mesa Pipeline 500' northeast of proposed location. See Attachment 2c.
- 5. Location and type of water supply.
  - a. Water to be used for drilling will be obtained from Bitter Creek under Permit T75377 with alternate sources for backup including Ute Indian Tribe water from Willow Creek, Ou ay city water provided by Ouray Brine and Vernal city water. Water to be used for cementing will be from municipal sources.
  - b. Wate will be transported by truck over approved access roads.
  - c. No water well is to be drilled for this location.

source of construction material. Native dirt, gravel and shale will be used from the proposed site.

- 7. Methods of handling waste disposal.
  - a. A reserve pit will be constructed to contain excess drilling fluids and drill cuttings. The reserve pit shall be located in cut material with at least 50% of the pit volume being below the original ground level. The reserve pit will be lined with a synthetic liner. The reserve pit will be fenced as soon as drilling is completed and that fence will be maintained in good order until the pit is dry and ready for reclamation.
  - b. Excess reserve pit fluid that has not evaporated at point of beginning reclamation work shall be hauled by truck to a commercial fluid disposal facility. Drill cuttings settled in the reserve pit will be buried in-situ when the pit is reclaimed. No liquid hydrocarbons will be discharged to the reserve pit or location.
  - c. In the event fluids are produced from the well any oil will be retained in tanks

- and transferred to the facilities at an existing well such as the State 6-36-14-22 and sold. Any water will be hauled by truck to a commercial fluid disposal facility.
- d. Trash will be stored in a trash cage and hauled by truck to a commercial or municipal landfill for disposal.
- e. Portable chemical toilets or septic tanks for temporary housing units placed on location will be pumped by the vendor company and contents hauled by truck to a commercial or municipal sewage treatment facility.
- f. No hazardous chemicals or substances are anticipated to be associated with the proposed operations.
- 8. Ancillary facilities. One or two temporary housing units on treation during drilling.

#### 9. Well-site layout

- a. Available topsoil will be removed from the location and stockpiled around the margins of the location at the toes of the fill slopes. The placement of the access road, drilling rig, supporting equipment, reserve pit, flare pit, and temporary lousing units are depicted by the detailed location layout figure, Drawing A-2. Cross sections through the site are attached as the typical cross section figure, Drawing C-1.
  - The flare pit will be located at minimum 100' from the well head to serve the bleed down lines from the choke manifold. The flare pit will not be lined. See Drawing A-2.
- c. Natural runoff will be diverted around the well pad.

#### 10. Plan for restoration of the surface.

- a. All surface areas not required for injection operations will be graded to as near original condition as possible and contoured to minimize possible erosion. Any rock encountered in excavation will be disposed of beneath backfill to return the surface to its present appearance and provide a medium for seed germination and vegetation growth.
- b. The stockpiled topsoil will be evenly distributed over the disturbed areas and reseeding will be performed as directed by Utah SITLA.
- c. Pits and any other area that could present a hazard to wildlife will be fenced off when the drill rig is removed or backfilled if dry and ready for reclamation.
- d. Reclamation will commence following completion of the well. If and when

the well-site is to be abandoned, all disturbed areas will be graded to as near original condition as possible and contoured to minimize possible erosion.

11. Surface ownership. The well-site, access road and injection facility are proposed to be constructed on land owned by the State of Utah and managed by Utah SITLA, 675
East 500 South, Suite 500, Salt Lake City, UT 84102-2818, 801-538-5100. No surface disturbance will begin until permits have been approved by Utah DOGM and US EPA Region VIII and 48 hours notice has been given to Utah DOGM and Utah SITLA.

## 12. Other information.

- a. The environment of the area is representative of the Upper Sonoran life zone and includes a sagebrush community with shadscale and saltbrush, pinyon-juniper, mountain mahogany, squawbush, prickly pear cactus and various grasses. The native brush and trees were removed from large areas of the vicinity during previous experimental work on in-situ recovery of kerogen from oil shale.
- b. The current primary surface use is wildlife habitat and cattle grazing. Secondary uses include natural gas and oil production and associated infrastructure.

The nearest occupied dwelling is approximately 0.6 mile to the west-northwest on the Bookcliff Ranch.

- d. The nearest live water is Sweet Water Creek, five miles to the east.
- e. An extensive cultural resource inventory of 4,043 acres in the vicinity including the proposed site and its access roads was completed during 2005 by Montgomery Archaeological Consultants (MOAC) prior to and during the drilling phase of the Seep Ridge 3-D Seismic Project. MOAC Report No. 05-210 was issued on August 8, 2005 and was assigned US Department of Interior (FLPMA) Permit No. 05-UT-60122 and State of Utah Antiquities Project (Survey) Permit No. U-05-MQ-0806b,p,s. No archaeological sites were recognized within the area proposed to be disturbed by this proposal. A cultural resource inventory to include ten acres centered on the well site has been commissioned to insure that the inventory in the vicinity is seamless.

### 13. Operator's representatives and certification.

a. Company Representative
David Knudson 435-940-9001 knudson@summitcorp.net
1245 Brickyard Rd. Suite 210
Salt Lake City, Utah 84106

- b. Company Permit Application Author
  Dave Knudson 435-940-9001 knudson@summitcorp.net
  Summit Operating, LLC
  1245 Brickyard Rd. Suite 210
  Salt Lake City, Utah 84106
- c. Excavation Contractor
  Diamond J Oilfield Construction, Inc. 435-789-0228
  P.O. Box 75
  Vernal, UT 84078
- d. Mail approved APD to: Company Representative
- e. <u>Direct Questions to</u>: Company Permit Application Author

#### Certification.

I hereby certify that I, or persons under ny direct supervision have inspected the proposed drill site and access route, that I am familiar with the conditions which currently exist; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Summit Operating, LLC and its contractors and subcoptractors in conformity with this APD package and the terms and conditions under which it is approved.

David Knudson, Land

Nov. 10, 2010

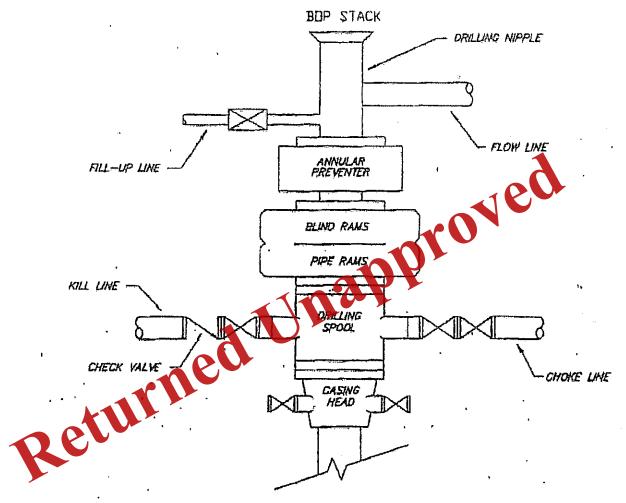
#### NOTIFICATIONS AND REPORTS

- 1. Any non-emergency change of plans to the original drilling program shall be submitted to Utah DOGM by using Form 9, Sundry Notices and Reports on Wells, and shall receive Utah DOGM approval prior to implementation.
- 2. Notice of commencement of surface disturbing activities will be given to Utah SITLA and Utah DOGM 48 hours in advance of the beginning of location construction.
- The spudding of the well will be reported to Utah DOGM within 24 hours.
- 4. Form 6, Entity Action Form, will be filed with Utah DOGM within five working days of spudding the well.
- 5. Utah DOGM will be notified 24 hours in advance of BOPE testing.
- 6. Daily drilling reports will be submitted to Utah DOGM at least monthly by using Form 9, Sundry Notices and Reports on Wells.

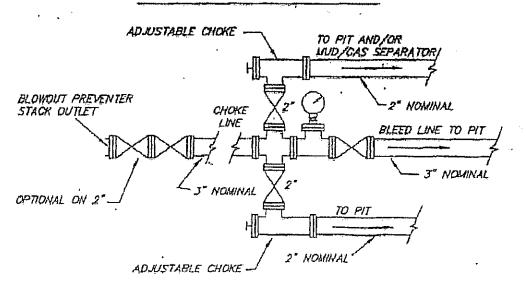
- 7. Utah DOGM will be notified 24 hours in advance of casing testing.
- Fresh water sand encountered during drilling shall be reported to Utah DOGM on Form 7, Report of Water Encountered During Drilling, simultaneously with the filing of Form 8, Well Completion or Recompletion Report and Log.

Returned Unapproved

# TYPICAL 3,000 p.s.i. BLOWOUT PREVENTER SCHEMATIC



# TYPICAL 3,000 ps.i. CHOKE MANIFOLD SCHEMATIC



Copy of Submitted



# SUMMIT OPERATING, LLC

1245 Brickyard Road, Suite 210, Salt Lake City, UT 84106 Telephone (435) 940-9001 • Fax (435) 940-9002

November 10, 2010

Ms. Diana Mason Utah DOGM P.O. Box 145801 Salt Lake City, UT 84114-5801

Re;

Request for Exception to Statewide Vertical Well Siting and Spacing Rules Ro 19-8-2 Summit Operating, LLC, Seep Ridge WIW 1, API No. 43-047-40317, ML 10803 1,716' fnl, 1,812' fel (SWNE) Sec. 35, T13S, R22E, SLM, Uintah Co., Itah

Dear Ms. Mason,

Summit Operating, LLC, respectfully requests administrative approval for an exception to the existing spacing order to drill the Seep Ridge WIW to yeter injection well. The exception site was selected to utilize an existing well access road and avoid a stand of timber and less level ground in the standard location window. Please review the attached map, Attachment 1, depicting the window in which a location could be drilled in compliance with R649-3-2, the proposed exception location requested herein, all eight offsetting location windows in which offsetting wells could be drilled in compliance with R6493-2, and the existing yells and recently permitted locations in the vicinity.

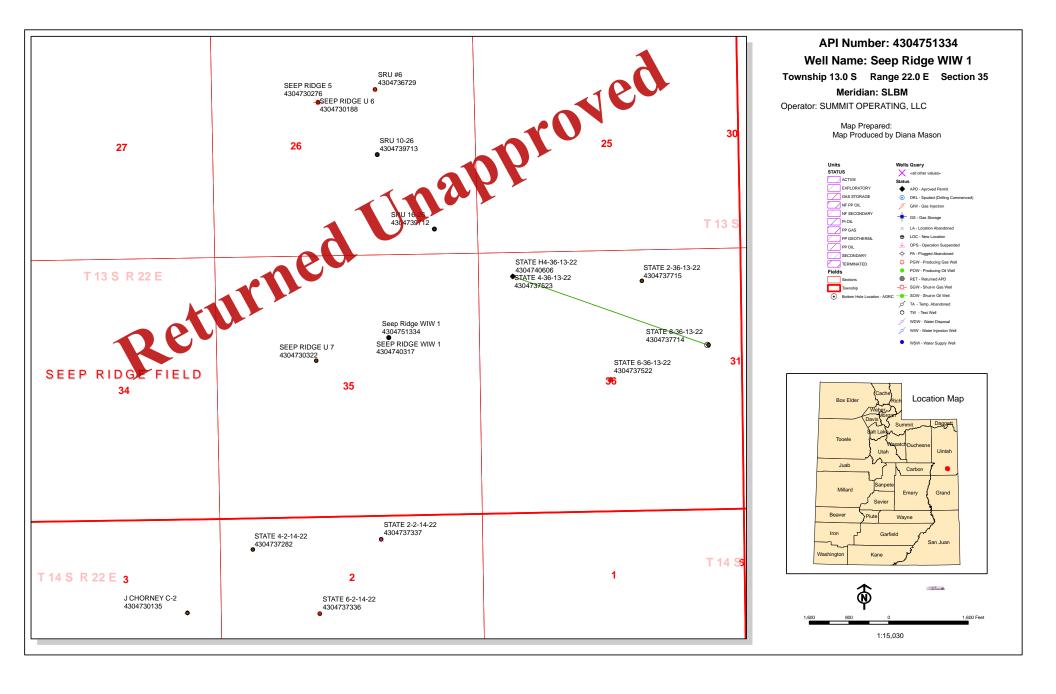
SEP Seep Ridge LLC is the only oil and gas lessee within 460° of the currently proposed well location. The proposed well would be the first well drilled on the lease and the underlying section. The proposed depth of the well is 3,700°. There is a narrow encroachment into the standard drilling window to the north of the proposed exception site as depicted by Attachment 1. The underlying surface owner is the State of Utah. A letter of consent from SEP-Seep Ridge LLC to the proposed exception location is attached and labeled Attachment 2.

Please let me know if there is any other information you need to assist Utah DOGM in consideration of this request.

Land Manager

Dave Knudso

Attachments

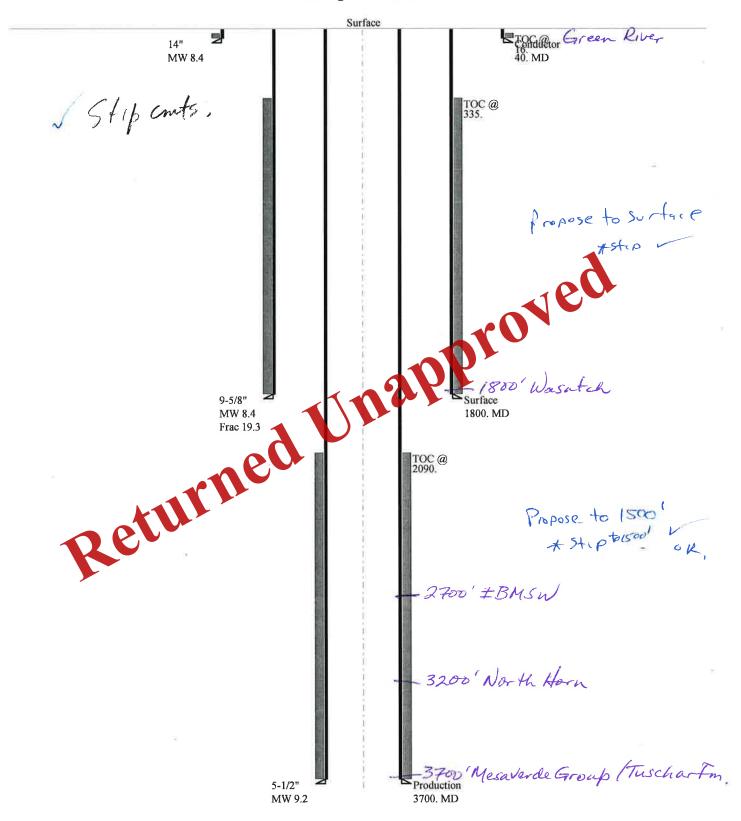


# BOPE REVIEW SUMMIT OPERATING, LLC Seep Ridge WIW 1 43047513340000

Well Name	SUMMIT OPERATING, LLC Seep Ridge WIW 1 430					5133	40000				
String	Cond Surf Pro			od							
Casing Size(")	14.000	9.625	=	5.	5.500	Ī					
Setting Depth (TVD)	40	1800	=	3.	700	Ť					
Previous Shoe Setting Dep	th (TVD)	0	40	=	12	800	Ť				
Max Mud Weight (ppg)		8.4	8.4	=	9.	0.2	Ť				
BOPE Proposed (psi)		0	500	=	H	000	Ť				
Casing Internal Yield (psi)		1000	2270	=	7	740	Ť				
Operators Max Anticipate	d Pressure (psi)	1400	Ë	=	7.	7.3	Ť				
							1		I		
Calculations	Cor	nd String				14.0	000	0 "			
Max BHP (psi)		.052*Setting Depth*MW=			17						
						_	_	BOPE Adequate For Drilling And Setting Casing at			
MASP (Gas) (psi)			x BHP-(0.12*Setting Depth)=					NO			
MASP (Gas/Mud) (psi)	Ma	ax BHP-(0.22*	x BHP-(0.22*Setting Depth)=			8		NO			
					_			*Can Full	Expected Pressure Be Head At Previous Shoe?		
Pressure At Previous Shoe		Depth - Previo	us Shoe	Deptl	n)=	8		NO	ОК		
Required Casing/BOPE To	est Pressure=					40		psi			
*Max Pressure Allowed @	Previous Casing Shoe=					0		psi *As	sumes lost if frae gradient		
Calculations	Sur	rf String			_	9.6	525	"	10		
Max BHP (psi)	341	.052*Setting Depth*MW=				_	123				
мах втіг (ря)		.032 500	ing Dept	11 1V1	**			ROPE A	equate For Drilling And Setting Casing at Depth		
MASP (Gas) (psi)	Ma	ax BHP-(0.12*	*Setting	Denfl	4	~?	<u> </u>	NO	air drill		
MASP (Gas/Mud) (psi)		ax BHP-(0.22*	-	$\rightarrow$			=	-	-,		
MASE (Gas/Muu) (psi)	IVI	1X BHF-1022	Setting	Берп	1)~	390	_	*Con Full	OK   Expected Pressure Be Held At Previous Shoe?		
Pressure At Previous Shoe	May RHP- 22*(Setting I	Death Previo	us Shoe	Dentl	-)=	399	_		-		
Required Casing/BOPE To	`		as snoc	Бери	1)	1,222	=	psi	Reasonable depth, no expected pressures		
*Max Pressure Allowed @					_	1589	=	-	sumes 1psi/ft frac gradient		
Max 1 ressure Anoweu @	Trevious Casing Since					40	_	psi As	suites 1psi/it trac gradient		
Calculations	d String				5.5	500	"				
Max BHP (psi)	.052*Setti	W=	1770								
								BOPE Ad	lequate For Drilling And Setting Casing at Depth		
MASP (Gas) (psi)	Ma	ax BHP-(0.12*	*Setting	Deptl	1)=	1326		YES			
MASP (Gas/Mud) (psi)	SP (Gas/Mud) (psi) Max BHP-(0.22*Setting Depth)=			1)=	956		YES	ОК			
								*Can Ful	Expected Pressure Be Held At Previous Shoe?		
Pressure At Previous Shoe Max BHP22*(Setting Depth - Previous Shoe Depth)=						1352		YES	ОК		
Required Casing/BOPE Test Pressure=						3000		psi			
*Max Pressure Allowed @ Previous Casing Shoe=						1800		psi *As	sumes 1psi/ft frac gradient		
						-					
Calculations	String					_	"				
Max BHP (psi) .052*Setting Depth*MW=			-		none .						
NA CONTRACTOR OF THE CONTRACTO	.,,	DVID (0.10)	.a	<b>5</b> .1		-	_		lequate For Drilling And Setting Casing at Depth		
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=			1	_	NO					
MASP (Gas/Mud) (psi)		x BHP-(0.22*Setting Depth)=			<u> </u>		NO F. II				
n	M DIID 22*/G	)4h D '	01	D .	L \	_	_		Expected Pressure Be Held At Previous Shoe?		
	Depth - Previous Shoe Depth)=			1—	_	NO .					
Required Casing/BOPE Te					<u> </u>	$\equiv$	psi	1 1/0 2 "			
*Max Pressure Allowed @ Previous Casing Shoe=						III	- 1	psi *As	sumes 1psi/ft frac gradient		

# 43047513340000 Seep Ridge WIW 1

**Casing Schematic** 



Well name:

43047513340000 Seep Ridge WIW 1

Operator:

**SUMMIT OPERATING, LLC** 

String type:

Location:

Surface

**UINTAH** 

COUNTY

Project ID:

43-047-51334

Design parameters:

Minimum design factors: Collapse:

**Environment:** 

Collapse

Mud weight: 8.400 ppg Design is based on evacuated pipe.

Design factor

1.125

H2S considered? Surface temperature: Bottom hole temperature: No 74 °F 99 °F

Temperature gradient: Minimum section length: 1.40 °F/100ft 100 ft

**Burst:** 

Design factor

1.00

True Vert

Depth

(ft)

1800

Cement top:

335 ft

**Burst** 

Max anticipated surface

pressure: Internal gradient:

1,324 psi 0.120 psi/ft

Calculated BHP 1,540 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J) 1.70 (J) 8 Round LTC: 1.60 (J) Buttress: Premium: 1.50 (J)

End

**Finish** 

Body yield:

Neutral point:

1.50 (B) Tension is based on air weight

Non-directional string.

ubsequent strings:

setting depth: Next mud weight: Next setting BHP: Fracture mud wt:

3,700 ft 9,200 ppg 1,768 psi 19.250 ppg

Fracture depth: Injection pressure:

Drift

Diameter

(in)

8.876

1,800 ft 1,800 psi

Est.

Cost

(\$) 14884

Run	Segment		Nominal
Seq	Length	Size	Weight
	(ft)	(in)	(lbs/ft
1	1800	9.625	32.30
Run	Collapse	Collapse	Collapse
Seq	Load _	Strength	Design

Design **Factor** 1370 1.744

**Burst** 

Load

(psi)

1540

ST&C Burst **Burst** Strength Design (psi) **Factor** 2270 1.47

(ft) 1800 **Tension** Load

Measured

Depth

(kips)

58.1

Tension **Tension** Strength Design (kips) **Factor** 254 4.37 J

Prepared

Helen Sadik-Macdonald Div of Oil, Gas & Mining

Phone: 801 538-5357 FAX: 801-359-3940

Date: December 1,2010 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 1800 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension:

Well name:

43047513340000 Seep Ridge WIW 1

Operator:

**SUMMIT OPERATING, LLC** 

String type:

Location:

Production

Project ID:

**UINTAH** 

COUNTY

43-047-51334

Design parameters:

**Collapse** 

Mud weight:

9.200 ppg

Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor

1.125

**Environment:** 

H2S considered? Surface temperature:

No 74 °F Bottom hole temperature: 126 °F 1.40 °F/100ft

Temperature gradient: Minimum section length:

100 ft

**Burst:** 

Design factor

8 Round STC:

8 Round LTC:

1.00

1.80 (J) 1.80 (J) Cement top:

2,090 ft

**Burst** 

Seq

1

Max anticipated surface

No backup mud specified.

Load

pressure: Internal gradient:

954 psi 0.220 psi/ft

Calculated BHP

1,768 psi

Premium:

de

N-80

Tension:

Buttress: 1.60 (J) 1.50 (J)

Body yield: 1.60 (B)

Tension is based on air weights Neutral point:

Non-directional string.

roved

Run Segment Nominal Weight Seq Length Size (ft) (in) (lbs/ft 1 3700 5.5 Run Collapse

ren

6290

ollapse

**Burst** Design Load **Factor** (psi) 3.557 1768 **Finish** LT&C

Burst

Strength

(psi)

7740

End

3700 **Burst** Design

**Factor** 

4.38

True Vert

Depth

(ft)

Depth (ft) 3700

**Tension** 

Load

(kips)

62.9

Measured

Diameter (in) 4.767

**Tension** 

Strength

(kips)

348

Drift

(\$) 20854 **Tension** Design

**Factor** 

5.53 J

Est.

Cost

Prepared

Helen Sadik-Macdonald Div of Oil, Gas & Mining

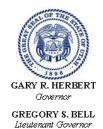
Phone: 801 538-5357 FAX: 801-359-3940

Date: December 1,2010 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 3700 ft, a mud weight of 9.2 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.



# State of Utah

#### DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

November 20, 2012

SUMMIT OPERATING, LLC 1245 Brickyard Road, Suite 210 Salt Lake City, UT 84106

Re: Application for Permit to Drill - UINTAH County, Utah

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the Seep Ridge WIW 1 well, API 43047513340000 that was submitted November 16, 2010 is being returned unapproved. If you plan on drilling this well in the future, you must first submit a new application.

Should you have any questions regarding this matter, please call me at (801) 538-5312.

Sincerely,

Diana Mason Environmental Scientist

Enclosure

cc: Bureau of Land Management, Vernal, Utah

